

Electrochem Power Solutions

PIG PIPELINE INSPECTION GAUGES

Reliable - Powerful - Extreme

Critical to the safe, secure transfer of valuable petroleum resources, the pipeline inspection gauge (PIG) industry places demanding requirements on power sources. Lithium batteries used in today's cost intensive inspection projects power many of the critical data collection functions, typically over long distances and multiple Electrochem® batteries provide dependable power on demand, extremely high reliability and peak performance in the harshest of environments. Internationally, major pigging services companies and OEM suppliers rely on the Electrochem® brand to insure that accurate corrosion, weld and pipe integrity data is collected successfully.

Extensive engineering and research allows Electrochem® batteries to deliver optimized performance in environmental temperatures from -55°C to $+93^{\circ}\text{C}$ with individual cell capacities of up to an incredible 40 ampere-hours. Battery packs are now available with custom fuel gauge technology, allowing confidence and maximum return when deploying over multiple projects. Advanced cell construction insures Electrochem® products will continue to be regarded as the benchmark for safety. Contact Electrochem® Power Solutions - "The Power to do Great Things" in today's pigging applications.



Custom Power Solutions

- Custom engineered packs tailored for pulse and product-life cycle requirements
- Wide range of cells with a variety of terminations
- Built-in safety features
- Advanced fuel gauge technology
- Quality designed and delivered

Extremely High Reliability

- Engineered for demanding shock & vibration applications
- Enhanced thionyl & sulfuryl chloride chemistries
- Surface-mount fuse & diode protection available
- Comprehensive qualification testing available
- UN/DOT certified for transportation
- ISO 9001:2000 certified facility

High Temperature Range

- Wide temperature performance from -55°C , up to $+93^{\circ}\text{C}$
- Proprietary construction & electrolyte chemistries for optimized restart
- Level rate performance over the entire temperature range



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CUSTOM POWER SOLUTIONS



High Rate Technology

Product	PMX 150 & 165	MWD 150	BCX 85	CSC 93
Chemical System	Chlorinated Sulfuryl Chloride	Enhanced Thionyl Chloride	Bromine Chloride Thionyl Chloride	Chlorinated Sulfuryl Chloride
OCV	3.9V	3.6V	3.9V	3.9
Rate Capability	Moderate	Moderate	Moderate to High	Moderate to High
Temperature	-40°C to +150 and -40°C to +165°C	0°C to +150°C	-55°C to +85°C	-20°C to +93°C
Applications	Moderate to high temperatures Downhole Petroleum Seismic applications	High shock & vibration capable Downhole Petroleum Pipeline applications	Capability Oceanographic, Military, Telemetry, Pipeline	Capability Oceanographic, Military, Telemetry, Industrial

Moderate Rate Anode Technology

Product	150 MR Series	165 MR Series	180 MR Series	200 MR Series
Chemical System	Thionyl Chloride	Thionyl Chloride	Thionyl Chloride	Thionyl Chloride
OCV	3.6V	3.6V	3.6V	3.6V
Rate Capability	Moderate	Moderate	Moderate	Moderate
Temperature	-40°C to +150°C	-40°C to +165°C	+50°C to +180°	+70°C to +200°C
Applications	Moderately high temperatures Downhole Petroleum	High temperature Downhole Petroleum	High temperature Downhole Petroleum	High temperature Downhole Petroleum

Bobbin Technology

Product	QTC Series	100 Series	150 Series	180 Series	200 Series
Chemical System	Thionyl Chloride	Thionyl Chloride	Thionyl Chloride	Thionyl Chloride	Thionyl Chloride
OCV	3.6V	3.6V	3.6V	3.6V	3.6V
Rate Capability	Low	Low	Low	Low	Low
Temperature	-40°C to +85°C	-40°C to +100°C	-40°C to +150°C	+50°C to +150°C	+70°C to +200°C
Applications	Memory backup	Telemetry, Industrial, Military, Medical	Temperatures Downhole Petroleum	Downhole Petroleum	Downhole Petroleum

